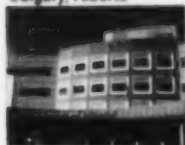


# Getting It Right: Case Studies of Effective Management of Chronic Disease Using Primary Health Care Teams

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Calgary Zone,  
Calgary, Alberta



Group Health Centre,  
Sault Ste. Marie, Ontario



Colchester East Hants Health  
Authority, Truro, Nova Scotia



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April 2009

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The project was led by the Council's Health Outcomes Steering Committee. The Council thanks all members of the secretariat for their work in supporting the development and production of this report.

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## FOREWORD

Research strongly supports the use of collaborative, team-based care for people with chronic diseases, mental health issues such as depression, and some special-needs populations. As part of our current strategic plan to identify and analyze high-performing health care systems, the Health Council of Canada is reviewing the factors that help and hinder the implementation of collaborative primary health care (PHC) teams.

To begin the discussion, we commissioned a study of chronic-illness care programs—four Canadian and one international—that use collaborative teams to deliver primary health care.

We intend this report to serve as a practical, experience-oriented tool for PHC providers to consider when trying to effect change. To that end, this report's main goal is to identify how applied PHC research can be translated into pragmatic action. Specific goals are to identify the following:

- critical success factors for effective team-based chronic disease management;
- challenges inherent in implementing the team approach;
- steps required to address and overcome obstacles; and
- delivery mode and performance of the teams in the case examples.

The Canadian examples reflect a range of geography, urban/rural settings, and size of program. They are:

- Alberta Health Services - Calgary Zone*: a large urban program in Western Canada
- Group Health Centre, Sault Ste. Marie, Ontario*: a well-established program covering several small to mid-sized urban centres in Northern Ontario
- Colchester East Hants Health Authority, Truro, Nova Scotia*: a specialized rural program in Atlantic Canada
- North End Community Health Centre, Halifax, Nova Scotia*: an urban program that is transforming the delivery of primary health care in Atlantic Canada.

The international case study describes a program in the city of Espoo, Finland, which embraces the Wagner's chronic care model.

Effective chronic disease management is a major challenge for today's health care systems. All five examples presented here embrace aspects of Wagner's chronic care model, although not all six aspects of that model are evident in each case study.

Collectively, the five case studies describe a recipe for success for the design and implementation of effective, team-based primary health care for people living with chronic illness. The ingredients include:

- effective leadership, both at the clinical and senior management levels;
- clear roles and responsibilities for team members, so that the patient gets the right care, at the right time, from the right provider;
- a common philosophy and shared values underpinning the team-based delivery of care;
- an electronic health/medical record system; and
- patient-centred programs and support services, combined with effective (usually electronic) self-assessment and self-management tools.

This report builds on previous work by the Health Council of Canada. In the *10-Year Plan to Strengthen Health Care* (2004), first ministers expanded our mandate to include reporting on the health status and health outcomes of Canadians. To address this need, we created a series of publications that profile the health and health care of Canadians living with chronic conditions. *Why Health Care Renewal Matters: Lessons from Diabetes* (March 2007) focused on diabetes care from a provider perspective. It demonstrated the "quality gap" between recommended care and the care actually received by most Canadians with this disease. A second report, *Why Health Care Renewal Matters: Learning from Canadians with Chronic Health Conditions*, (December 2007) and two data supplements, *Canadians' Experiences with Chronic Illness Care in 2007* and *Population Patterns of Chronic Health Conditions in Canada*, looked more broadly at how



Canadians with chronic conditions described their experiences with the health care system. Furthermore, the Health Council of Canada created another series of reports with a primary health care focus. *Primary Health Care* (January 2005) was a background paper to accompany *Health Care Renewal in Canada: Accelerating Change* (2005). Another report, *Canadian Survey of Experiences with Primary Health Care in 2007* (January 2008) was a data supplement to *Fixing the Foundation: An Update on Primary Health Care and Home Care Renewal in Canada* (January 2008). Also profiled in the *Fixing the Foundation* report were government programs in areas of health promotion and illness prevention.

To provide effective health care in the future, we must, of course, ensure that there are appropriate numbers of health care providers practising to the full scope of their competencies. However, we must also enable the system-level changes needed to support efficient and effective care. As the case studies illustrate, such changes have the potential to transform health care, especially in chronic disease management. We would like the reader to compare how the findings of the five case studies compare with the delivery of primary health care in their jurisdictions. As governments are committed to and increasingly interested in team-based primary health care, let us use this opportunity to consider improvements in Canada's approach, our capacity, and—most of all—the design of primary health care teams to ensure success.

M. Ian Bowmer, MD  
Chair, Health Outcomes Steering Committee  
Health Council of Canada



## LIST OF ACRONYMS

AC - anticoagulation

ACDMAC - Alberta Chronic Disease  
Management Advisory Committee

ADMG - Algoma District Medical  
Group

CDA - Canadian Diabetes  
Association

CEHHA - Colchester East Hants  
Health Authority

CHC - community health centre

CHF - congestive heart failure

CDM - chronic disease management

COPD - chronic obstructive  
pulmonary disease

CPR - collaborative practice round

EMR - electronic medical record

FTE - full-time equivalent

GHC - Group Health Centre

GHOD - good health outcomes for  
diabetes

GP - general practitioner

HPI - health promotion initiative

INR - international normalized ratio

IT - information technology

KCHW - Kilo Centre for Health and  
Welfare

NECHC - North End Community  
Health Centre

NP - nurse practitioner

OT - occupational therapy

PDSA - Plan (hunch), Do (test),  
Study (reflect), Act (next)

PHC - Primary Health Care

## INTRODUCTION

Chronic disease is any illness or condition that persists over an extended period of time, and has a major impact on health care use and quality of life. Heart disease, chronic obstructive pulmonary disease (COPD), diabetes, mood disorders, cancer, and arthritis are among the common chronic diseases. They affect more than one in three Canadians, usually develop slowly, and typically are incurable. Many chronic conditions become more complex with age, making continuity of care vitally important.<sup>1</sup>

More than 70% of those over the age of 60 have at least one chronic condition. Among people 65 and older, 49% have two or more chronic illnesses.<sup>2</sup> The economic burden of chronic disease in Canada is growing, putting additional pressure on an already strained health care system. Already high, the direct and indirect costs of chronic illness will continue to grow unless greater efforts are made in chronic disease management and prevention.<sup>3</sup>

### CHRONIC DISEASE MANAGEMENT

Chronic disease management (CDM) begins upon the first contact with a health care practitioner. At that point, the focus is on preventing disease progression and minimizing health complications and acute exacerbations of the illness. As diseases progress, continuity and integration of care become increasingly important, especially for those aspects in which patients are active partners. Even slight reductions in risk factors for chronic illness may lead to improved health and quality of life.<sup>4</sup>

One suggestion is that primary health care teams should form the basis of care for people with chronic illnesses. Team-based care can "reduce wait times for appointments, strengthen the providers' ability to focus on prevention, coordinate care among health care providers, and help patients better manage their chronic conditions."<sup>5</sup> To be successful, CDM must be evidence based and patient centred; it must use multiple interventions/strategies, promote collaboration among health care practitioners

and communities, and include patient self-management and evaluation components.<sup>6</sup>

### PRIMARY HEALTH CARE TEAMS

A synthesis of the literature indicates that positive provider, system, and patient outcomes result from enhanced interprofessional collaboration. Patient satisfaction and health outcomes have been shown to improve when team-based care is compared to a uni-professional mode.<sup>7</sup> A team-based approach to primary health care improves provider satisfaction, enhances knowledge and skills, provides a broader range of services, results in more efficient use of resources, and improves coordination and access to care.<sup>7</sup> Based on self-reported data, patients with access to a primary health care team—and thus to greater continuity of care and a reduction in unmet health care needs—have reduced emergency department visits and hospitalization.<sup>8</sup>

The benefits of a team-based approach to CDM are increasingly well documented. Interprofessional care has led to clinical improvements for patients with depression, diabetes, and congestive heart failure.<sup>9</sup> For patients with congestive heart failure, disease management programs involving follow-up by an interprofessional team reduces hospitalization and costs.<sup>10</sup> The Wagner chronic care model<sup>11</sup> (described in detail in Appendix 1) is considered to encourage quality CDM. The cornerstone of Wagner's model is the patient care team: "primary care teams make it possible to manage complex illnesses intensively without losing the benefits of comprehensive, continuous primary care."<sup>12</sup>

This report presents five case studies of effective chronic disease management involving primary health care teams. The report identifies the critical success factors that distinguish each team; the challenges inherent in implementing a primary health care team approach; the steps required to address and overcome obstacles; the delivery modes, and performance levels of teams; and the lessons learned about them. Four of the

studies are of Canadian examples; one is international.

The four Canadian cases are:

- *Alberta Health Services – Calgary Zone*, Calgary, AB
- *Group Health Centre*, Sault Ste. Marie, ON
- *Colchester East Hants Health Authority*, Truro, NS
- *North End Community Health Centre*, Halifax, NS

The international case study references a program in the city of Espoo, Finland because of the lead author's familiarity with the program and it embraces the Wagner's chronic care model.

Baseline data were obtained for each from a short questionnaire sent to a senior manager at each organization (see Appendix 2). These data were supplemented by follow-up interviews and additional documentation.

Each case study begins with a brief contextual background, followed by a description of the primary health care team. The key drivers of success and the main challenges/obstacles are documented for each case. The report concludes with key lessons as to what works and what does not, and offers guidance on how to initiate and/or strengthen a primary health care team approach to CDM in Canada

Alberta Health Services – Calgary Zone  
Calgary, Alberta



Colchester East Hants Health Authority  
Truro, Nova Scotia



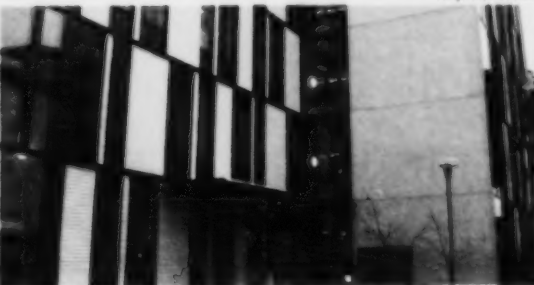
Group Health Centre  
Sault Ste. Marie, Ontario



The North End Community Health Centre  
Halifax, Nova Scotia



The Kilo Centre for Health and Welfare  
Espoo, Finland



## CANADIAN CASE STUDIES

# 1

### ALBERTA HEALTH SERVICES – CALGARY ZONE

#### Key features and philosophy

- Support healthy lifestyles by empowering clients and demonstrating outcomes.
- Coach/encourage/motivate clients.
- Facilitate client self-management.
- Conduct assessments and develop a collaborative treatment plan.
- Think creatively to assist clients with problem-solving.
- Provide education and options for clients to consider.
- Navigate the health care system with clients, to help meet their needs.
- Help clients focus on ability instead of disability.

The Calgary Health Region provides health care for approximately 1.3 million people in the city of Calgary and its rural environs, an area of 39,000 square kilometres.

In 2002, in response to rising rates of chronic disease and associated costs, the Calgary region of Alberta Health Services developed a chronic disease management (CDM) strategy<sup>13</sup> under the direction and leadership of Sandra Delon (Director) and Peter Sargious (Medical Lead). As its framework for implementing the strategy, Calgary adopted the chronic care model developed by the MacColl Institute for Health Care Innovation (<http://www.improvingchroniccare.org/>), which, in turn, had been adapted from the Wagner chronic care model.<sup>11</sup> The Wagner model can be applied to a variety of chronic illnesses, health care settings, and target populations.<sup>14</sup> It has been shown to improve health outcomes, resulting in healthier patients, more satisfied providers, and more cost-effective use of health care resources. As the Calgary Zone's CDM strategy evolves, both health promotion and disease prevention will be included and the BC expanded chronic care model will be adopted ([http://www.calgaryhealthregion.ca/programs/cdm/index/website\\_diagram.pdf](http://www.calgaryhealthregion.ca/programs/cdm/index/website_diagram.pdf)).

In 2007, Alberta Health Services – Calgary completed an extensive strategic planning exercise to enhance and improve implementation of the chronic care

model. (See Appendix 3 for brief descriptions of key strategic initiatives.)

#### Primary health care team

The primary health care team has formal linkages with specialty areas including the Diabetes, Hypertension, and Cholesterol Centre; Cardiac Function Clinic; Weight Management Program; and the Mental Health and Chronic Pain Centre. The primary health care team includes nurses, dietitians, pharmacists, respiratory therapists, occupational and physical therapists, kinesiologists, and diabetes educators.

Patients are referred to the team by their primary care physician or other health professional. Patients can choose (on their own, or by the referral from the health care provider) to make use of the community-based education, exercise, self-management, and nutrition programs (e.g. Living Well with a Chronic Condition). Similar referral and self-referral mechanisms exist for the Calgary COPD and Asthma Program.

Health care professionals provide patients with the tools needed to learn how to develop problem-solving skills. They become coaches for their patients, helping them work through problems as a team. This supportive approach encourages patients to be motivated and maintain good habits. Self-motivation helps patients develop the confidence and understanding to change their behaviours and

achieve self-efficacy. Care-giving and responsibility for achieving goals are also shared by patient and provider. If goals are not met, the "team" moves on to develop alternative strategies and set new, more appropriate goals, thus minimizing any feeling of shame.

In essence, when patients with chronic diseases have the support and guidance of health care providers they are more likely to make internal changes that will help them manage their chronic disease independently.

### **Chronic Disease Management (CDM) strategy**

The chief elements of the Calgary Zone's CDM strategy and its implementation are described below:

#### *Nurse support in primary care.*

Community-based nurses are partnered with family physicians to provide support in CDM using a patient-centred approach to case management, referral to appropriate services, and disease management according to clinical practice guidelines.

*Living Well with a Chronic Condition Program.* This community-based exercise, education, and self-management program for people with a range of chronic conditions operates at several locations.

*Programs for diverse populations.* The Calgary Zone's CDM programs are designed to reduce barriers to access experienced by the city's two largest cultural groups—its Chinese and Indo-Asian populations.

*Complex chronic care.* To reduce their high hospital admission rate, an interdisciplinary clinic has been established for patients with multiple chronic conditions. High-intensity, high-frequency users of the acute care system are identified and referred to the clinic, which is staffed by internists, specialized nurses, and an interprofessional team.

*Access to specialist expertise in primary care.* Specialty clinic expertise is provided to family physicians in their offices by

certified diabetes educators (Diabetes, Hypertension, and Cholesterol Centre staff) and certified respiratory educators (Calgary COPD and Asthma Program staff). Care and role algorithms are developed in partnership with specialty clinics.

*Academic detailing.* Pharmacists provide practical, evidence-based information and tools to support clinical decision-making for family physicians and other community health care providers. In essence, the academic detailing process involves face-to-face education of prescribers by trained health care professionals, typically pharmacists, physicians, or nurses. The goal of academic detailing is to change prescribing of targeted drugs to be consistent with medical evidence, support patient safety, and to be cost-effective medication choices.

*Information systems.* An electronic CDM information system is available. It supports communication among health care providers; enables providers to monitor the progression of disease; and provides prompts to consider further monitoring or interventions according to practice guidelines. By enhancing information-sharing and supporting workflow, it assists in a coordinated care approach.

*Evaluation.* Performance measurement and quality improvement are integrated into all CDM programs. Key performance indicators are collected and analyzed, to assess the calibre and effectiveness of CDM programs and to provide a standard from which incremental change can be measured.

The Calgary Zone's CDM program has demonstrated success through evaluations showing improvements in clinical outcomes and health care utilization.

For example, between baseline and one-year follow-up...

- ) The percentage of diabetic patients with glycated haemoglobin (HbA1C)

control increased by 17% (from 40% to 56%).

- The percentage of dyslipidemia patients with Triglyceride control increased by 13% (from 34% to 47%).
- The percentage of patients with a COPD-related exacerbation resulting in an in-patient hospitalization decreased by 19% (from 320 to 260 per 1,000 patients).
- In-patient hospital admissions for all patients decreased by 41% (from 380 to 224 per 1,000 patients).
- Emergency department visits for all patients decreased by 34% (from 755 to 495 per 1,000 patients).<sup>15</sup>

### Drivers of success

#### *Collaboration and/or partnerships*

The Calgary Zone's CDM program utilizes a patient-centred, partnership approach to care, giving patients a central role in their own care. Together, patient and provider develop a treatment approach in accord with the patient's values and preferences. Health care providers build trust and bring patients into an atmosphere where they feel respected and supported.

The partnership model of care is well suited for treating patients with chronic disease. First, health care providers work with patients to identify their major health concerns. Then they clarify these issues, to help patients find a point of focus and direction in their treatment. Since patients are experts on their own lives, they benefit from working with their health care providers to find health care solutions they can incorporate into their everyday lives and routines. Patients are more likely to change if they can make their own decisions and set their own goals, with the assistance of their health care providers.

#### *Quality improvement*

The Calgary Zone's program is based on best-practice CDM and is continually modified to incorporate new evidence. A continuous quality improvement approach allows clinicians and administrators to monitor the program's strengths and weaknesses, and to make appropriate changes on an ongoing basis. PDSA (see Appendix 8) methodology is

used to facilitate change and the adoption of new methodologies.

#### *Education and training*

Specialist knowledge and expertise is incorporated into clinical care algorithms all staff use to facilitate collaborative, coordinated care. The algorithms define roles, guide care, support referrals among service areas, and help ensure efficient and timely delivery of CDM services. Several learning opportunities are available to staff to ensure that chronic illness care remains cutting edge. They include:

- Introduction to chronic disease management (see Appendix 4)
- Chronic care skill development workshop (see Appendix 5)
- Flinders model workshop (see Appendix 6)

#### *Information systems*

Information from Calgary Laboratory Services is viewable directly through the electronic CDM information system. Reports are faxed to teams who do not use the information system. Both formal and informal opportunities exist for consultation with other team members. Currently, Alberta Health Services - Calgary Zone is piloting a CDM business intelligence dashboard. The dashboard integrates information collected from various information systems into one shared record

### Key Challenges/Obstacles

#### *Regional/community programs*

Initially, some were concerned that the CDM program might duplicate existing programs. To prevent such duplication, clear eligibility criteria were established for each program, including the roles and responsibilities of providers. As a result, a standardized process for partnering with programs was created, ensuring that cross-referral pathways were established. The focus now is on identifying and targeting gaps in existing care.

#### *Client self-management*

The exercise program offered within the CDM program is short term. Some have speculated this would hamper the development of sustainable, healthy patient behaviours. To address the challenge, a Maintenance Exercise



Program offering exercise classes for people with chronic diseases was set up. These classes are administered by community fitness and recreation centres independently of the CDM program, which does, however, play a role in training the fitness leaders, and by providing quality improvement oversight.

#### *Changing perspectives*

Since the CDM program has expanded beyond the initial three conditions—diabetes, hypertension, and dyslipidemia—the medical model of management has become less applicable. To overcome difficulties in expanding to other diseases, a client-centred coaching approach (the so-called nursing model) has come to seem more appropriate. The goal of the model is to support patients in self-managing their own conditions and health behaviour changes.

#### **Summary and key lessons**

The Alberta Health Services – Calgary Zone CDM clearly demonstrates that outcomes for a

range of chronic diseases can be improved by using a multi-faceted approach that pays attention to community, the health system, self-management support, delivery system design, decision-making support, and clinical information systems. Calgary's model provides a road map for improving the way organizations deliver chronic illness care.

The key lessons of the Alberta Health Services – Calgary Zone CDM program are:

- › Establish clear eligibility criteria for the program and the roles and responsibilities of each provider.
- › Create a structured process for partnering with other programs to ensure established cross-referral mechanisms.
- › Support patients in the self-management of their condition and health behaviour change.



A chronic disease management team nurse reviews a treatment strategy with a couple at one of the centres in the Alberta Health Services – Calgary Zone



### Key features and philosophy

Use an interdisciplinary team approach and innovative information technology to:

- Promote health and prevent illness.
- Provide better health outcomes.
- Prevent or reduce hospital admissions.
- Foster patient education and self-care.

The concept of the Group Health Centre was born in 1957, when a group of Sault Ste. Marie residents and union members (United Steelworkers of America and Canadian Union of Public Employees) identified the need for accessible health care services. In 1960, supporters of the initiative canvassed local residents and steelworkers, requesting \$135 from each person. They raised a total of \$675,000. The Group Health Centre (GHC) accepted its first patients in September 1963.<sup>16</sup>

The centre is a partnership between the Algoma District Medical Group (ADMG), an independent medical group, and the Group Health Association (GHA), an independent, not-for-profit corporation<sup>16</sup>. The partnership represents an innovative approach to providing community-based health care. Representatives from the ADMG are members of the GHC Joint Management Committee, which proposes policy to the Board of Directors and Medical Corporation.<sup>16</sup> The Group Health Association, which owns the physical facilities, is responsible for hiring all non-physician personnel.

The centre was built on the principles of group medical practice, consumer sponsorship, and the prepayment of medical insurance.<sup>17</sup> The GHC's core philosophy is to provide patient-centred care, emphasizing patient education and self-management. All health care providers practice with this philosophy in mind. Currently, the GHC's 66 physicians and associates and over 300 allied health professionals provide services to a rostered population of more than 57,000 patients.<sup>17</sup>

The GHC's CDM program was established to

guide illness prevention and chronic disease management. It has become a model organization for chronic disease management; its use of interdisciplinary teams has been central to this success. The foundation of the CDM program is the Health Promotion Initiative (HPI). The HPI team comprises several physicians and managers who meet monthly to administer the program, seeking to put into practice the underlying philosophy of how chronic disease management should function within the organization.

When patients come to the GHC they complete the Ministry of Health's enrolment form and become rostered to a family provider. As specific conditions are identified, patients are put on registry lists. For example, patients diagnosed with diabetes are placed on a registry and a diabetic template is entered into the electronic information system to aid in the management of their care. Similarly, after being seen by their primary care provider, anticoagulation (AC) patients are referred to the AC clinic, where they are monitored by specially trained nurses following medical directives in AC protocols. Patients can access the smoking cessation program, either by self-referral or by referral from their primary care provider. This program, too, is managed by specially trained nurses with physician guidance.

### Primary health care team

GHC seeks to ensure patients receive the right care, at the right time, from the most appropriate provider. To do so, the centre's interdisciplinary team of primary and specialty care physicians, nurse practitioners, and other health care providers utilize electronic medical records (EMRs) and medical directives, and focus on maximizing

their scope of practice.<sup>17</sup> Through the use of technology, GHC has advanced the management of chronic disease by enabling clinical information to be shared among community physicians, pharmacists, and patients. This improved information sharing, called EMRxtra, was funded by Canada Health Infoway.

The interdisciplinary team functions under the direction of strong clinical leadership, thanks to the HPI structure. It is further supported by use of the EMR, which facilitates communication among the team and monitoring of patient outcomes. Clinical guidelines enable each team member to maximize their scope of practice.<sup>17</sup>

The programs established to date continue to demonstrate improvement in patient outcomes. Current programs handle diabetes, congestive heart failure, anticoagulation, vascular intervention, osteoporosis, smoking cessation, immunization, asthma, and cervical and mammography screening. Projects are in development for COPD and mental health.

Patients and their families are encouraged to be active participants in their own care. Specially designed web portals have been developed to help patients to share information with family members, to assist them in accessing the best health information available, and to monitor their test results. Two of the available web tools are Diabetes Complications, and Cholesterol and Heart. Patient education and self-management tools are available through the GHC's website ([http://ghc.mediresource.com/health\\_tools.asp](http://ghc.mediresource.com/health_tools.asp)).

### **Drivers of success**

#### *Collaboration and/or partnerships*

A collaborative community program has been established to improve health outcomes for patients with congestive heart failure (CHF). Typically, such patients are first referred to the program when they are admitted to hospital. Subsequently they are cared for by the GHC's home-visiting CHF nurse and other members of the health care team. The pilot project included an evidence-based nurse intervention prior to the patient's hospital discharge with a follow-up visit within 48

hours to ensure medication compliance. Results of this program, sustained over a five-year period, show a 43% reduction in hospital readmission rates among participants.<sup>17</sup>

The Algoma Breast Health Program, which monitors breast cancer, is another effective collaborative effort. Its partners are the GHC, the Sault Area Hospital, Algoma Public Health, and the Ontario Breast Screening Program. The program has reduced wait times; diagnosis of breast cancer to surgical intervention now takes less than a month, down from 108 days.<sup>17</sup> In addition, 70.6% of female GHC patients received mammography screening, well above the national average of 53.6% based on the 1996/97 National Population Health Survey.<sup>18</sup>

Collectively, these programs demonstrate how patient outcomes can be monitored effectively and how they can help to inform program planning.

#### *Information systems*

In 1997, the GHC decided to implement an EMR system, a critical decision in transforming the delivery of care for GHC patients. The system provides a common platform for sharing information and care plans among physicians and allied health professionals. Implementing the system—including relinquishing paper-based charts—was very challenging, but it has become the cornerstone of the GHC's evidence-based CDM, and research programs. It is used by all health care staff—physicians, nurses, and other providers. This paperless platform tracks all of a patient's clinical activity, including visits to physicians (primary and specialty), allied providers, clinics, labs, and hospitals, thus creating the most comprehensive record available.

Once the EMR was up and working, the HPI committee reviewed evidence-based guidelines and developed programs for the clinic. As part of this review, the EMR templates mentioned above were developed. They are used as part of the referral process, to coordinate care provision, and to further the application of CDM best practices. Developing and managing medical directives, including ensuring appropriate specialized training, has enhanced the model of care.

### *Quality improvement*

Accountability through program evaluation is a cornerstone of the GHC. For the HPI program, success is measured by monitoring clinically important patient outcomes.<sup>17</sup>

One of the best examples of performance evaluation (both internal and external) is the GHC's diabetes program (the Algoma Diabetes Education and Care Program). Open to both rostered and community patients, the program provides education and health care to 4,138 patients diagnosed with diabetes. The HPI team developed an electronic template within the EMR system that enables the primary care provider to monitor diabetes patients and ensure timely, proactive treatment that meets best practice guidelines. In addition, the centre developed health outcome measurements based on the Canadian Diabetes Association's (CDA) clinical practice guidelines.<sup>19</sup>

Internally, GHC primary health care providers (GPs and nurse practitioners) are offered a summary of their own family practice. The good health outcomes for diabetes (GHOD) scores and a yearly report are circulated internally. As the Canadian Diabetes Association's guidelines change, the GHC template and program also change to capture and measure appropriate outcomes, so that the latest evidence is incorporated into practice. The built-in flexibility of the EMR has enabled the centre's CDM programs to stay current.

The GHC's nurse-run anticoagulation (AC) clinic monitors patients' international normalized ratios (INRs). After being seen by their primary care provider, AC patients are referred to the AC clinic, where their care is monitored by specially trained nurses who follow medical directives in AC protocols. Three years of data show that 84% of GHC INRs are in the therapeutic range ( $\pm 0.2\%$ ), compared to "usual care" benchmarks in the 40%–60% range.<sup>17</sup> With 583 patients, the GHC's AC clinic has become one of the largest community-based AC clinics in Canada.

### *Education and training*

On joining the GHC, providers and staff receive EMR training, including the use of templates and referral processes. To keep up

with systems and processes changes, training is ongoing. As practice guidelines (e.g. the CDA guidelines for diabetes care) change, the templates are amended to reflect best practices and ensure outcomes are properly measured. Each member of the health care team can thus stay abreast of current best practices in clinical care for specific chronic diseases.

Primary care providers learn about CDM programs through regular monthly meetings, internal newsletters, and word of mouth. The GHC publishes a quarterly patient newsletter, posts notices throughout the clinic, and supports online health information with three electronic consumer health information kiosks for those who do not have home computer access. These systems include all health information brochures that are created by the GHC and other recognized health care organizations (e.g. *Heart & Stroke*, *Cancer Care*).

## **Key Challenges/Obstacles**

### *Human resources*

Health care providers must cope with conflicting demands and busy workloads. As standards of care evolve, the labour-intensive task of ensuring that evidence-based guidelines remain up to date puts demands on time. As well, change fatigue often presents itself in health care organizations. Maintaining enthusiasm when the clinic is understaffed is always a challenge.

Often, an underlying challenge is balancing the needs of acute care patients with those of patients requiring chronic disease prevention and management.

The GHC has experienced physician recruitment and retention difficulties over the past few years, and although the CDM programs are still operating, it is a challenge to maximize existing resources. With the loss of two HPI champions in the last four years, progress has slowed. Nevertheless, the GHC continues to measure clinically important patient outcomes and to focus on program improvement.

The CDM program remains strong by focusing on positive outcomes. Current planning

emphasizes the value of nurse-managed clinics. They are seen as crucial in monitoring patients with chronic disease and improving the educational components of CDM initiatives. Nurse involvement removes some of the burden from family physicians.

#### *Information systems*

Developing and using the EMR presented challenges. At the GHC, a strong information technology (IT) infrastructure was critical to ensure the sustainability of the EMR system. IT specialists who developed the system needed a good understanding of physician flow and processes within the medical centre, and the effects of implementing EMR on health care providers needed to be identified. Evaluation needed to include issues pertaining to the context, workflow, finances, and culture of the organization.

Funding for IT has always been a challenge in health care. Although there is considerable work involved in demonstration projects, they provide valuable funding and development opportunities. The GHC successfully applied to several eHealth programs that fund innovative IT demonstration projects.

#### **Summary and key lessons**

The GHC's HPI program concentrates on population health and primary care delivery within an interdisciplinary setting, where

most health care providers work at the same location. The established CDM infrastructure includes patient and health care provider education components. Continuous quality improvement principles are integral to its success. A common EMR platform facilitates sharing of information and care plans among all health care providers.

Deploying interdisciplinary teams to maximize scope of practice involved a necessary shift from independent practice, as did using medical directives. CDM programs can succeed if the patient is always kept at the heart of the initiative. By involving patients and their families in managing care and setting goals that improve patient health outcomes, it is possible to monitor success in patient care.

The key lessons of the Group Health Centre's CDM program are:

- › The development of interdisciplinary teams, with a focus on maximizing scope of practice, and the use of medical directives
- › Continuous assessment and evaluation using an EMR system
- › Strong leadership at governance and clinical levels



Dr. Lewis O'Brien reviews a patient's electronic health record at the Group Health Centre in Sault Ste. Marie, Ontario

# 3

## COLCHESTER EAST HANTS HEALTH AUTHORITY, TRURO, NOVA SCOTIA

### Key features and philosophy

- Support patients to be active participants in their care; a patient-centred program with educated and involved clients.
- Provide patients with the skills to effectively self-manage their condition.
- Allow providers to use their skills in the most appropriate, effective and efficient way; an integrated, multidisciplinary approach.
- Increase access to services (both screening and management) through community-based PHC teams; shift focus away from hospital-based care and try to reach the patient early on in their disease process.
- Give educated, active physicians and team members the tools and resources for providing quality care according to standards and best practices.

The Colchester East Hants Health Authority (CEHHA) in Nova Scotia is responsible for managing and delivering a wide range of services to the 73,000 residents of Colchester County and the Municipality of East Hants.

It is estimated that as many as 3,300 people in the municipalities of Colchester and East Hants currently suffer from, or are at risk of developing chronic obstructive pulmonary disease (COPD).<sup>20</sup> The already-burdened hospital system was having difficulty handling the increasing COPD caseload, and there was no formal COPD management program, and resources were limited. Believing something needed to be done for these patients, the CEHHA launched the COPD Education Program in August, 2007. The program complements the respiratory services offered at Colchester Regional Hospital, which treats patients with COPD, whereas the COPD Education Program teaches patients self-management skills that enable them to control their disease. The program includes monthly community-based clinics in four designated areas, as well as regular clinics in other parts of the district.

### Primary health care team

The COPD Education Program is coordinated by a core team of professionals, including a COPD education coordinator and educators, a cardio-respiratory manager, and a primary health care manager. The core team meets regularly to oversee the program's delivery

and operation. Additional professionals, including physicians, physiotherapists, pharmacists, dietitians, addiction services professionals, and psychologists provide guidance to the core team and are involved in referrals and patient education. It is an integrated, multidisciplinary approach that allows providers to use their skills in the most appropriate, effective and efficient way.

Patients are referred to the clinic by their family physician, emergency room physicians, or other health care professionals. Anyone over the age of 40 who presents with a chronic, productive cough and shortness of breath, particularly with exertion, and who smokes or has a smoking history, may be referred. Once the referral form is received, the COPD education coordinator contacts the patient to set up an initial appointment. Ideally, the first visit is held at the physician's office, although this is not always possible. The initial visit includes a full history and respiratory physical, spirometry, review of medications, and a lifestyle changes discussion with one of the educators. A month later, the patient is contacted by telephone to check on his/her progress. After the progress call, there are six-month and one-year follow-up visits with COPD educators during which spirometry is repeated, and any concerns are addressed. Self-management techniques are discussed with the patient during each visit, and a written progress report is provided to the patient's physician.



Physicians associated with the program do not bill for the time spent working with the COPD educators. The requirement on their time is minimal. After the initial appointment with each referred patient and the COPD educator, physicians are simply updated on the patient's progress.

Most patients seen through the program have already been diagnosed with COPD, and the focus is on management, including evaluating and adjusting medications, suggesting lifestyle changes, and offering referrals to professionals, such as physiotherapists and respirologists. The program takes a proactive approach, educating individuals about COPD risk factors, symptoms and treatment options.

There has not yet been a full, external evaluation, but initial statistics and anecdotal evidence demonstrate the success of the project. Initial statistics indicate that the COPD Education Program improves patients' health. Since the launch of the program in August 2007, over 183 patients have been tested and/or treated. Although the numbers in the COPD program are small, the results so far are encouraging:

- › 15% smoking cessation rate through program (at six-month follow up).
- › 80% of patients were found to be using medications incorrectly at the time of referral to the program. Half of these patients (41% of total patient group) have had medication changes based on program recommendations (at 6 month follow-up).
- › 50% of patients say their condition has improved significantly since beginning the program (at six-month follow up).
- › 20% of patients have an improved Medical Research Council's dyspnea score indicating significant improvement in their ability to complete everyday tasks and exercise with less breathlessness (at six-month follow up).
- › 30% of patients report changing their lifestyle to include recommended exercise and breathing exercises.<sup>20</sup>

## Drivers of success

### *Collaboration and/or partnerships*

The COPD Education Program has expanded since its inception. As well as adding other health care professionals to the team, and receiving additional funding, new initiatives are being introduced. One of these is the complementary, 12-week Pulmonary Rehabilitation Program which was launched in autumn, 2008, with six patients. The program is held at Colchester Regional Hospital where the participating patients meet twice a week to learn how to relax, how to control breathing, and how to better manage medications. The program also encourages self-management through regular exercise and other lifestyle changes. Ongoing promotion of the program is expanding the referral base, with increased referrals from the emergency room being specifically sought.

### *Program promotion and changing perspectives*

Although many administrators and health care professionals in the CEHHA recognized the need for a primary health care approach to COPD, the transition from a hospital-based model of care to a primary health care approach was difficult. COPD Education Program administrators overcame this challenge through persistent promotion. The founding program group took every opportunity available to talk about the program throughout the district. Every success, small or large, was shared with stakeholders and the media. For example, after an article appeared in the local newspaper, several patients contacted their family physicians to ask how they could join the program. In addition, the senior leadership team was kept fully informed and, in turn, provided support for the program.

### *Client self-management*

The overall objective is a patient-centred program with educated clients. The COPD program is focused on supporting patient to be active participants in their care, and providing them with the skills to effectively self-manage.

## Key challenges/obstacles

### *Physician recruitment*

Initially, it was difficult to recruit physician champions, particularly in more-populated

areas of the district. In addition, the district did not have any specialty physicians to provide leadership. Better and broader communication made it possible to recruit and involve general practice, emergency room, and specialist physicians who now provide referrals to the program and collaborate with COPD educators. Educating practitioners about the value of a primary health care approach, the need for the COPD Education Program, and the initial successes of the program convinced many physicians that involvement would be worthwhile. Starting small and demonstrating success should help get the buy-in needed to grow and sustain the program.

#### *Infrastructure resources and support*

The COPD Education Program suffered from insufficient funding, space and equipment inadequacies, human resource limitations, and lack of administrative support. These challenges were overcome by making maximum use of what was available – all team members will endeavour to work to their full scope of practice, and funding was sought from every conceivable source (private partnerships, Respiratory/Ambulatory Care Services, and Public Health). By managing the program and its resources efficiently, the wait time to see a COPD educator is minimal. The demonstrated success of the program has allowed the team to secure additional funding.

### **Summary and key lessons**

Since its launch in 2007, the focus of the CEHHA COPD has been on patient post-diagnosis education and management, including evaluating and adjusting medications as necessary, suggesting lifestyle changes, and offering referrals to professionals, such as physiotherapists and respirologists. In addition, by providing access spirometry in areas where access has been limited, the program provides a screening tool for those who may not yet have been diagnosed.

The key lessons of the CEHHA's COPD program are:

- › Promote the program—involve and obtain referrals from general practice, emergency room, and specialist physicians.
- › Maximize team potential—set the enabling conditions for change by showing team members how they can best use their skills.
- › Obtain support from senior leadership—a crucial lesson; keep them informed and, if possible, involved in the program.
- › Start small and demonstrate the success of what you have implemented—to get the buy-in needed to grow and sustain the program.



Respiratory therapist, Holly Mitchell, with a patient at the Colchester East Hants Health Authority in Truro, Nova Scotia



# 4

## THE NORTH END COMMUNITY HEALTH CENTRE, HALIFAX, NOVA SCOTIA

### Key features and philosophy

- Develop self-management goals with the patient using a harm reduction philosophy
- Able to address the needs of clients with chronic mental health issues
- Develop a shared-care mental health program addressing the health care needs of this population
- Develop linkage to tertiary care for improved continuity of care for clients and better access to health services

Halifax's North End is a diverse, multi-ethnic, low-income community, home to students, artists, and the gay community. It is characterized by higher levels of crime and homelessness than elsewhere in the city. The area's median household income is in the lowest 10% of the range in Halifax.<sup>21</sup> The North End Community Health Centre (NECHC) was established in 1971 by area residents. Initially, the centre was staffed by volunteer physicians and neighbourhood women working as receptionists. The clinic has evolved since then, taking the community health centre (CHC) model as its philosophical base.

A key component of the CHC model is providing health care using interdisciplinary teams (<http://www.cachca.ca/english/what%20is%20a%20chc/expanded%20definition/default.asp?s=1>). The typical CHC is a non-profit or publicly funded entity with a locally based board of governors (or directors) and advisory committee. CHCs serve a specific, identifiable community and deliver a range of primary health care services focused on health promotion and community development.

The NECHC incorporates the CHC model in its program planning. Members of the health care team practise using harm-reduction and social-determinants-of-health frameworks (See Appendix 6). Harm reduction evolved as a philosophy during the 1980s, in response to the AIDS epidemic and its threat to public health.<sup>22</sup> It seeks to minimize harmful practices and behaviours, acknowledging that they cannot always be eliminated. To minimize risks to a person, it takes into

account the person's environment and other contextual factors. Patients are viewed as partners in their own care. They are often seen in their own home or at a community agency (e.g. Salvation Army hostel). Referrals are made in-house to other health care providers (occupational therapist, mental health worker, and dietitian), as required.

A large number of the clients served by the NECHC have been diagnosed with mental illness (as well as other chronic diseases). A unique focus of the centre is its ability to address the needs of clients with chronic mental health issues. It developed a shared-care mental health program addressing the health care needs of this population. Two factors contributed to the establishment of the program: the realization that individuals and families living with mental illness deserved much more attention, and an absence of adequate mental health service provision at local and provincial levels.

The development of a linkage to tertiary care has allowed for improved continuity of care for clients and better access to health services.

By developing partnerships with local children's and adults' tertiary care centres, the NECHC has been able to secure funding for a half-time child-and-adolescent social worker and a full-time adult community mental health nurse. These employees are viewed as full members of the team. They often receive referrals, participate in collaborative practice rounds (CPR) and provide direction to staff regarding appropriate and timely referrals for clients requiring additional mental health treatment. This proactive approach to care

has allowed the team to be more responsive to their clients' needs and to identify issues early.

A child-and-adolescent psychiatrist (0.2 FTE) is available to the PHC team. The NEHC's social worker manages the psychiatrist's appointment schedule, screening most referrals. Wait times for access to this service are typically not more than two months; less, during an emergency.

A similar situation exists for adult mental health care. The mental health team works collaboratively with an outreach nurse to address the needs of clients within the community. The outreach nurse advocates referrals and assists clients in navigating the system, often a major barrier to mental health care. To provide direct access to mental health care, the outreach nurse often visits community agencies, local shelters, and soup kitchens.

### **Primary health care team**

Today, the team comprises an addiction counsellor, administrative staff, community nutritionist, management team, mental health workers, psychiatrists, nurses, nurse practitioners, physicians, social workers, and community volunteers. Currently there are five family physicians (4 FTEs or "full-time equivalents"). Each physician brings unique personal expertise and interests above that of a GP (e.g. expertise in addictions, mental health, obstetrics/pediatrics, emergency medicine). The clinic has four nurses (2.4 FTEs), each having special interests in areas such as addictions, women's health, acupuncture, foot care, and diabetes management. In addition, there are three NPs (1 FTE) with diverse backgrounds, including one who is also a practising pharmacist. The PHC team also includes one social worker who has been with the centre for over 25 years, and a health care manager who has a nursing background.

No external agency has made a formal evaluation of the NEHC's CDM services. Nevertheless, adjustments to CDM have been made based upon the team's clinical expertise and anecdotal evidence. As team members

identify specific needs, attempts are made to develop partnerships to help address these concerns. For example, in September 2007, the need for PHC occupational therapy service was identified, and a partnership was established with the School of Occupational Therapy at Dalhousie University. The main focus of the partnership was to identify and address the needs for OT services at the centre. This proved to be a win-win partnership—the School established a placement in PHC OT research, students found field placements, and opportunities increased for participatory, community-based research.

### **Drivers of success**

#### *Collaboration and/or partnerships*

The interprofessional team is a unit comprised of practitioners with varied and specialized backgrounds.<sup>23</sup> All team members are located in the centre. They integrate their services and synchronize their goals so that clients can benefit from this shared care. Collaboration typically takes two forms: informally, on a daily basis in hallways; and more formally, at weekly collaborative practice rounds (CPR). CPR is a patient-centred approach to care in which two or more disciplines continuously interact. In this interprofessional communication process, each practitioner brings his/her unique body of knowledge to the conversation, thereby integrating the team's expertise to influence patient care. CPR allows each practitioner to share different aspects of the client's challenges and provides an opportunity to receive expert feedback from other team members.

Time is allotted to NEHC staff for continuing education and discussion of current clinical practices. Procedures ensure that clinical practice guidelines are followed with respect to CDM. For example, nurses participate in monthly meetings dedicated to professional practice issues and professional development. They also attend externally offered educational sessions to maintain competencies. Other health professionals associated with the NEHC have similar educational opportunities.

The NECHC strategically exploits opportunities for improved client care by establishing partnerships with local district health authorities and universities. The arrangement with Dalhousie Dental School is an example—the NECHC offers students placement positions, and clients receive improved access to dental services. The NECHC values student placements from all health disciplines. It has proved an excellent means for students to gain experience in primary health care and collaborative practice. Not only do medical students, for example, get experience working with physicians, but they are also placed directly with a social worker and nursing staff, thereby gaining an understanding of their role on the team.

#### *Community access and responsiveness*

Within the North End community, 70% of the population is receiving some form of social assistance/welfare. At the NECHC, poverty is recognized as the major determinant of health in the community. To improve access to health care, clients are frequently offered services off site, either at another community agency or in their own home, by nurses, physicians, or NPs. Community outreach also helps with accessibility to health care. For those who have mobility issues, physicians make home visits. If a gap is identified in the assessment or treatment plan during a home visit, the practitioner contacts the appropriate team member (e.g. social worker, dietitian) as required.

#### *Client self-management*

At the NECHC, the patient is an active participant in their own care. For their part, the centre's practitioners understand that they practise in a culturally diverse area, and work to foster inclusiveness by being aware of each client's unique abilities and background. During the course of a patient's care, self-management goals are developed with the patient using a harm reduction philosophy. Clients are accepted for who they are and for the unique strengths they bring to the partnership, rather than being viewed as lacking certain abilities. They are given whatever support they need to guide them towards improving their overall health, and minimizing risks that could lead to acute exacerbation of their illness.

While patients in other medical settings may be deemed non-compliant if they do not show up for appointments or do not take medications, the NECHC's team-based approach mitigates such behaviour by addressing clients' concerns. When working with challenging clients, younger, less-experienced clinicians are mentored by more experienced members of the team. The ability to "share these thoughts and insights" helps practitioners handle complex cases.

#### *Team effectiveness*

The NECHC recognizes that it is possible to do more for clients as part of a team. Its culture supports innovative thinking, and although the workload can be heavy, it is a shared workload. According to one physician at the centre, the workload is not reduced by being part of a PHC team, but there are improvements in efficiencies; each practitioner is able to do the work for which they were trained. This approach has also meant that each health care provider has the opportunity to explore personal special interests. The staff social worker, for example, concentrates on housing issues. In another instance, one of the physicians, who has a background in obstetrics, has been working to establish a midwifery program so that community-based midwives will be able to provide full-spectrum maternity care in the community. These contributions of unique expertise and areas of special interest greatly broaden the NECHC's collective expertise.

#### *Information systems*

Four years ago, the NECHC incorporated the electronic medical record (EMR) system developed by the province of Nova Scotia. This clinical information system, used by everyone for every client, has improved access to information and information sharing amongst health care providers. However, it is limited in its ability to monitor patient populations and inform overall service delivery. In terms of operations, the business and health team manager are responsible for managing the EMR.

## **Key challenges/obstacles**

### *Infrastructure resources and support*

As community partnerships grow and additional health services become available, infrastructure is often a limiting factor. Space limitations are an ongoing challenge, constraining the ability of the NEHC to fully meet the needs of its clientele. The NEHC estimates it is operating at least 40% below its space requirements for current programs, and may require three times the current space as programs expand. This has been the number one concern in the last two strategic plans.

### *Collaboration and/or partnerships*

The past few years have seen many changes in the provincial Department of Health PHC staff. This can be an obstacle, since developing trusting relationships between frontline health care practitioners and provincial staff takes time. The turnover can also lead to difficulty securing sustainable funding, since health dollars often get passed on to acute care services. Additional funding would allow the NEHC to hire additional practitioners (OTs, physiotherapists, dietitians, and nurses) who could make a huge difference in managing chronic diseases.

### *Information systems*

The EMR has been successful in terms of improving information sharing among clinicians. All disciplines are able to record information, and access reports and electronic laboratory tests. However, the current program is unable to provide accurate and timely data that would aid in designing and implementing PHC programs, particularly those related to chronic disease. Information systems are needed that would facilitate patient follow-ups (e.g. well-woman/man exams, immunizations, and clinical practice guideline-based follow-up). In general, the EMR cannot adequately track population health needs. This has a detrimental effect on conducting internal evaluations. To improve information capability, the NEHC has a physician sitting on the provincial working group for EMR development.

### *Human resources*

The health care team at the NEHC was

launched in the early 1980s. The current board chair was a physician with the clinic for 25 years. Some team members have been with the clinic for over 15 years. Following the standard CHC model, all NEHC administrative and clinical staff are salaried. There is a well-established procedure for staff performance review and development. At present there is a good core team, but there are shortages in a number of disciplines that could strengthen health promotion programs. Finding appropriate new team members continues to be a major struggle.

All physicians at the NEHC are salaried, as per the standard CHC model. However, fee-for-service models of compensation generally do not allow the time required for CDM. NEHC physicians do report that job satisfaction improves as the clinic is able to offer clients a broader range of services, in a timely fashion.

Once the necessary health disciplines are identified, it is necessary to select individuals who are the right "fit" for working on a collaborative team. In this setting, a physician may not always be a client's primary care provider. Importantly, there needs to be a designated leader to whom all practitioners are accountable, including physicians.

## **Summary and key lessons**

The NEHC adheres to the philosophies and principles of what a traditional community health centre represents.

Collaboration in chronic disease management has flourished at the NEHC. Procedures encouraging collaboration are in place—informal and formal rounds, staff meetings, and improved information systems. The team approach to care has allowed practitioners to capitalize on their personal interests to the benefit of the whole community. Partnerships with other agencies have improved services. Common philosophical goals, such as harm reduction and determinants of health, underpin the centre's health care service delivery. Effective communication among team members is fostered through strong leadership, mentoring of team members, dedication to the client, and valuing each health team member's expertise.

Key lessons from the NEHC approach to chronic disease management are:

- › Shared philosophy—Members of the team need to share a similar philosophy and values concerning the delivery of health care. At NEHC, emphasis is placed on addressing the determinants of health and operating from a harm-reduction perspective.
- › Team constituents—At the very least, the CDM team must include a dietitian, nurse, occupational therapist, and physician. Practitioners who are flexible and willing to take risks are essential.
- › Community development—CDM must reach beyond the walls of the health care facility. Community development is a strong component of CDM that cannot be overlooked.
- › Mutual respect between primary and tertiary care providers—This element is essential. Differences in perspective can lead to ineffective communication and a misalignment of goals.



Patients take part in a nutrition counseling session at the North End Community Health Centre in Halifax, Nova Scotia



A primary health care team nurse checks a patient's blood pressure at the NEHC in Halifax, Nova Scotia



## INTERNATIONAL CASE STUDY

### 5 HEALTH CARE IN FINLAND

#### Key features and philosophy

- Support self management—group and individual counselling, website for information.
- Plan follow-up visit scheme—according to number of chronic diseases and the patient's level of self management.
- Describe division of tasks/clinical guidelines—for each professional group within the team, taking full advantage of each one's complementary skills.
- Set criteria for segmentation of patients with chronic illness— different care schemes, depending on nature and severity of the disease.<sup>27</sup>

Finland is bordered by Norway, Sweden, and Russia. It has 415 municipalities. It spends about 7.5% of its gross domestic product on health care. Canada spent 10.6% of the GDP in 2007 on healthcare. In 2005, Finland's population was 5.3 million; of that number, 17% were aged 15 years and under and 16% were aged 65 and older. That year, the average life expectancy for men was 76 years and 83 years for women.<sup>24</sup>

Finland has a tripartite health care delivery system: municipal, private, and occupational. Most Finnish health care is provided at the municipal level. Municipal health care is funded through a combination of municipal taxes, central government allocations, and user fees. The private sector is small. Mostly located in large cities, it consists primarily of ambulatory care. About 10% of physicians have a private practice; they account for 16% of all outpatient visits, whether for primary or secondary care. Private hospitals account for 5% of all hospital activities.<sup>24</sup> Employers are required by law to provide free preventive occupational health services for their employees. Many employers provide additional primary care services. Overall, the services provided through employer occupational health care comprise about 13 % of primary medical care in Finland.<sup>24</sup>

Overall health policy is set centrally by the Ministry of Social Affairs and Health. Municipalities put these policies into practice.

Primary health care services are provided through public health centres, which have a variety of practitioners on staff—doctors, nurses, public health nurses, physiotherapists, and occupational therapists. They provide prenatal and child care, home help, speech therapy, laboratory and radiology services, school and student health care, and advice on contraception. The exact combination of services and health professionals varies from centre to centre.<sup>24</sup>

Clinical staff in the health centres make home visits as required. Many public health centres have a number of acute beds for people with mild or chronic illness, a small laboratory, a radiology unit, and a physiotherapy unit. Generally, most physicians working in municipal health centres, like other health professionals, are salaried employees.<sup>24</sup>

The health centre is the primary point of health service for most people with chronic conditions, or conditions which may later be diagnosed as chronic disease. In addition, occupational health care refers patients with chronic conditions to public health centres, since most employers' plans do not cover care after diagnosis.

All residents are assigned a personal doctor and nurse by their local public health centre. They can then elect to use either the local health centre or private health services.

## City of Espoo

Espoo, Finland's second-largest city, is near the capital, Helsinki. It has a population of 235,000. The population of Espoo is somewhat younger than the country as a whole; 20% are under the age of 15 and only 10% are aged 65 and over. Espoo life expectancy—77.3 years for men and 83.1 for women—is slightly better than the national average.<sup>25</sup> Espoo's 12 public health centres employ about 250 people.

The Kilo Centre for Health and Welfare (KCHW) is typical of Finnish municipal health centres. It serves a population of about 11,000. Services include acute medical care for all age groups, care of chronic conditions, consultations for home nursing, and maternity and well-baby clinics run by public health nurses.

## Primary Health Care Team

At the KCHW, the primary health care team comprises five family physicians/general practitioners, one public health nurse, two practice nurses (similar to nurse practitioners), two auxiliary nurses (generally speaking, equivalent to Registered Practical Nurses or Licensed Practical Nurses in Canada), and other health professionals such as physiotherapists.

## Drivers of success

### *Information systems*

The KCHW has access to an electronic patient information system and electronic decision support tools to enhance care processes. The electronic patient information system (available to all health professionals in the KCHW) is part of an Espoo-wide network for all municipal health centres. The decision support system is available to each practitioner via the health centre's intranet. It includes links to national and local treatment guidelines and other necessary data resources. Each team in the health centre has had training in utilizing the patient information system and decision support tools.

The patient information system consists of a combination of self-assessment tools and information on lifestyle issues, including articles on healthy living, virtual health check,

and electronic consultation. Most of the information and all of the tests have been developed by national experts and are available nation-wide. An important component of the self-assessment web pages is the self-care form (Appendix 7). Patients complete this form prior to their scheduled annual or biannual checkup.

### *Quality improvement*

The KCHW is a member of the Finnish Quality Networks, of which there are four: prevention of cardiovascular diseases; non-smoking; reducing excessive alcohol consumption; and osteoporosis and fracture prevention. Although participation in the networks is voluntary, over 60 health centres, covering nearly 60% of the population of Finland, have joined the Quality Networks.<sup>26</sup> The main activities of the networks are yearly process measurements, results of intermediate outcomes, network meetings, local quality meetings, and campaigns. In 2006, over a two-week period, an extensive measurement of the care of persons with coronary diseases, diabetes, and/or hypertension was undertaken. It was the largest quality of care measurement exercise ever undertaken in Finland.<sup>26</sup> Since 2006, it has been repeated annually.

### *Client self-management*

Consistent with the Wagner model, clinicians in the KCHW strive to "put the patient in the driver's seat." Newly diagnosed patients are informed about the importance of daily habits (diet, exercise, smoking, alcohol) for their condition, and are given information on the daily care of the disease. The progress of patients is evaluated regularly. Process and outcome parameters (e.g. number of yearly visits for chronic care, HbA1C-levels of diabetics) are followed up continuously. As well, the Quality Networks compare the KCHW with other Finnish health centres (using benchmarks based on several parameters of chronic conditions in a two-week sample period).

Self-management tools are an important component of CDM in Finland. The tools were designed and developed through the participation of health professionals and experienced patients. Patients have access to web-based self-assessment tools, and once



diagnosed with a chronic illness receive support in using self-management tools.<sup>27</sup> Other support services for patients include tools for self-monitoring of body mass, waist circumference and blood pressure, individual and group counselling, and guides to healthy living.

#### *Education and training*

The model employed at the KCHW has been discussed in seminars for the medical care personnel of all Espoo health centres (about 250 people). Smaller workshops have been held at the local health centre and team levels. The KCHW has shown that good implementation needs the engagement of management and enough resources at the grassroots level to take care of all the tasks of acute and chronic care. Also important to note is that without a long tradition of multi-professional team work in Espoo, implementation of successful chronic care management initiatives at the KCHW might not have been successful.

#### *Provider incentives*

All health professionals working in the municipal health centres are salaried employees of the city. Financial incentives are in place to facilitate the management of chronic conditions. For example, the health professionals at the KCHW work towards disease-specific targets and process indicators. Their performance against these targets and indicators is reviewed annually. If they meet or exceed the targets, they are paid a bonus.

### **Key challenges/obstacles**

#### *Changing perspectives*

Traditionally, the KCHW has worked within an acute care model. The biggest challenge has been to change this model so as to achieve planned, managed care of chronic conditions while still providing acute care. The Wagner model, designed to enhance and give structure to working with chronic care conditions, was used as a tool. Practitioners have recognized that the model helps in care provision and, more importantly, does not create an additional burden. The approach was implemented through workshop

discussions—it was not imposed through a top-down order.

### **Summary and key lessons**

Finland's history of primary health care delivered through municipal health centres with multi-disciplinary teams has meant that the introduction of chronic care management initiatives has been fairly seamless. Health centres are the primary point of health service for most people with chronic conditions (or conditions which may later be diagnosed as chronic disease). Self-management tools are an important component of CDM in Finland. Patients have access to web-based self-assessment tools, and once diagnosed with a chronic illness, receive support in using self-management tools.

The key lessons of the KCHW experience are:

- › Patients' long-term disease management and complex medication management will not be successful without a structured treatment model and supporting tools.
- › Implementation needs the engagement of management and enough resources at the grassroots level to take care of all tasks (i.e. acute and chronic care).
- › Change is not easy and needs continuous reinforcement. A good training program for current staff and an orientation for newcomers is necessary.



Nurse, Anna-Mari Leppakoski, and Dr. Tuomo Lehtovuori, with a patient at the Kilo Centre for Health and Welfare in Espoo, Finland

## CRITICAL SUCCESS FACTORS AND LESSONS

Chronic disease management is a challenge in today's health care systems, where financial resources are limited and communities are boxed into silos of care. For individuals with chronic disease, easy access to health care services is important. In the examples studied here, the health care providers act as navigators of the health care system for patients who may have difficulties accessing services.

Each of the five case studies demonstrated how resources can be maximized to enable improved access to primary care services. Each addressed the issue of access in a variety of ways, with the central component being the involvement of the PHC team. Alberta Health Services – Calgary Zone focused on improving access by incorporating specialist care into the primary care setting. There, patients with multiple chronic illnesses have access to a specialized interdisciplinary clinic well suited to provide care for individuals with multiple co-morbidities. The GHC incorporated a similar approach; patients are added to disease registries when issues are identified. This approach has led to improved health service delivery and better monitoring of health outcomes. The NEHC improved access by ensuring the centre was visible within the community.

All five case studies embraced aspects of Wagner's chronic care model. Not all six aspects are evident in each case study, thus showing that all aspects of the Wagner model need not be evident for the model to be successful in terms of improving quality of care and good patient outcomes.<sup>28</sup>

The secret of successful implementation is good communication. The five locations studied here used multiple modes—informal methods, formal processes such as team meetings, and electronic mechanisms. All five embraced a collaborative decision-making framework that involved all team members. This proved essential since although each team member has a unique role and expertise, the hallmark of an effective team is mutual respect among providers as well as among providers and patients.

The GHC and CEHHA examples demonstrate the importance of evaluating the research evidence and implementing small pilot projects. Continuous assessment and evaluation using an electronic medical record system remain keys to success. Monitoring and measuring important clinical outcomes make it possible to better define success. And when a pilot program is determined to be successful, expanding it to the whole patient population becomes much easier.

A key contributor to success in the five case studies was strong leadership at both governance and clinical levels. For example, senior leaders at the five locations were kept informed and engaged. Moreover, the studies also showed that without committed financial and corporate support, the implementation of a team-based primary health care approach to CDM would not have been as successful as it was. The case studies also highlighted the importance of ensuring that all health care providers have the tools (e.g. EMR, CQI) to provide high quality care to patients with chronic disease.

Another common element in the five case studies was the implementation of an EMR system at each locale. EMRs ensure all health care providers are up to date on clinical findings and on current care being provided to the patient. The transition from a paper-based chart to an electronic chart can represent a huge culture and system change, but it is worth it. At the five locales, adopting the EMR proved crucial to developing and implementing effective team-based CDM. It strengthened communication and made for a more efficient application of experience and skills among the members of the primary health care team. It also helped team members to work towards common goals established in consultation with the patient. Without this infrastructure it would not have been possible to implement clinical practice guidelines effectively.

A distinguishing feature of the five cases was the use of EMR data for program evaluation at both the individual practitioner and population levels. This enabled the different

organizations to identify and address changing patient needs. Thus, they could ensure that existing programs were appropriate and that provider skills were current and applied effectively. The organizations could also identify and set up education and/or training requirements. In addition, information gleaned from the EMR could be used to celebrate success, such as positive patient or process outcomes; in turn, these could be used to argue for additional resources.

An interdisciplinary team is essential to CDM initiatives. The composition of the team will vary, but at a minimum such a team should comprise a physician and a nurse. Teams in the five studies included other health professionals such as dietitians, nutritionists, occupational therapists, physiotherapists, and pharmacists. For good health promotion activities, it is vital that these health care providers be involved in the process, as was demonstrated at the NEHC. The roles and responsibilities of each member of the team must be clearly defined. Team members must understand that each has a unique role and expertise. It is important to promote a culture of inter- and cross-disciplinary collaboration and cooperation, especially where functions are similar. In such an interdisciplinary setting, the physician is not always the primary care person. A key common attribute of the five cases was a designated leader to whom all practitioners, including physicians, were accountable. Finally, the composition of an interdisciplinary team should be flexible—able to be adjusted to meet the particular needs of the patient. These attributes are all hallmarks of the five cases described herein.

Although the make-up of the team is important, how it functions is crucial. Through sharing a vision and enabling each health care provider to maximize the care they can provide, momentum can be shifted in a positive direction. All team members can acknowledge the contribution of one another's efforts towards improving patient care. Through this learning process—and the support of other team members—team members can also improve their own performance. In addition, mentoring junior practitioners can improve appreciation for and understanding of the philosophy of the

CDM program, and facilitate clinicians in sharing effective methods for working with challenging cases.

It is imperative to trust in the team and continually support it through communication, education, and resources. It is very important to acknowledge the team's achievements.

Incentives may be helpful in implementing and sustaining primary health care team-based CDM.<sup>29</sup> They may be easier to implement and manage where health professionals—such as those at the KCHW and the NEHC—are salaried employees. At these locations, an annual performance review process is in place, which measures patient outcomes relating to the management of chronic illness, among other things. As of April 1, 2009, we expect Alberta will introduce a new fee payment for physicians to encourage them to take a more active role in treating and managing patients with chronic illness.

All five cases recognized the need for a focus on primary prevention—i.e. health promotion and disease prevention—to reduce the overall prevalence of chronic illness. For example, Alberta Health Services – Calgary Zone intended to phase in the BC Expanded Chronic Care Model with its specific emphasis on primary prevention and health public policy. The GHC, HEHC, and KCHW also provided primary prevention programs to patients and the community. They did not apply a particular model to do so; rather, they developed programs tailored to the circumstances of their respective communities.

Secondary prevention, a key feature of the Wagner model, was evident in all five cases. It includes patient self-assessment and self-management tools, patient education, information on healthy living and risk behaviours, and advice and support. Its emphasis is on working with those with a chronic illness to minimize and mitigate the impact of the disease.

A final lesson from each case study is the importance of providing the patient with the tools and resources necessary to be an active

participant in their own care. CDM programs succeed when patients are at the heart of the initiative. By involving patients and their families in the management of their care and setting goals that improve patients' health outcomes, it is possible to monitor success in patient care. Crucial factors for patients' success in effectively self-managing a chronic illness include access to web-based tools and ongoing education programs. Patients also need the support of their peers, and they need to feel respected and valued as partners in their own care. In the Finnish experience, health professionals and expert patients were involved in designing and developing patient self-assessment and self-management tools together—an example of effective collaboration. While the expert patient

approach in developing self-management initiatives in CDM has merit, Greenhalgh<sup>30</sup> argues that a more holistic model is required: one that takes as its basis the social determinants of health. This is the model which the NEHC applied to the way health professionals worked with all patients, not just those with chronic illness.

Engineering the shift from independent practice requires the development of interdisciplinary teams, with a focus on maximizing scope of practice. Using medical directives is also necessary. With the shift made, the right care, at the right time, by the right provider can be provided to all patients with chronic disease.

## FINAL LESSONS FOR CANADA FROM FINLAND

In addition to lessons gleaned from the case studies collectively, Finland's experience in using primary health care teams to manage patients with chronic illness offers three distinct lessons in the areas of: electronic health information system support, annual service quality assessment, and provider incentives.

**Electronic health information system support:** The system in Finland consists of a clinical information and decision support (clinical guidelines) component for health providers, self-assessment and self-monitoring tools, and information on healthy living for patients. One of the features of the electronic health information system is a self-care form that patients complete prior to an appointment with either a physician or a nurse. The completed self-care form serves as the basis of the patient's personal treatment plan. The treatment plan not only addresses treatment

concerns but it also focuses on disease prevention and health promotion.

**Annual service quality assessment:** Annually, over a two-week period, an extensive survey is taken of persons with coronary disease, diabetes and hypertension. The results from the annual survey are used as outcomes measures of the effectiveness of the various processes in place for managing patients with chronic illness. Thus, there is evidence that resources are being used efficiently and effectively.

**Provider incentives:** Physicians and other health professionals have financial incentives for reaching specific goals and targets such as disease-specific parameters and process indicators related to the management of patients with chronic illness. This ensures that health professionals give due attention to the management of patients with chronic illness.

## CONCLUSION

Preventing chronic disease and promoting healthy lifestyles should be the cornerstones of any health care system. To maximize efficiencies and improve health outcomes for people with a chronic disease, more attention needs to be focused on implementing effective and sustainable primary health care programs. The case studies outlined in this paper attempt to discern the features that distinguish and delineate successful team-based interventions for patients with a chronic disease.

The five examples of a primary care, team-based approach to the management of patients with a chronic disease are very different in scope and structure. Yet all pursued three common purposes:

- › Provide the best possible environment and increased access to services through primary health care teams for patients with a chronic disease.
- › Ensure that team members have the tools and resources necessary to provide high-quality care for patients with a chronic disease.
- › Provide patients with the tools and support required to manage chronic illness effectively.

The five case studies demonstrated that it is possible to design and implement effective, PHC team-based approaches to CDM. The recipe for success includes, but is not limited to:

- › Effective communication
- › Patient-centred programs
- › Clinician engagement
- › Community involvement and empowerment
- › Community outreach
- › Strong support from senior leadership

**Leadership, an interdisciplinary team approach, an electronic database (EMR), patient self-management tools and support, and the monitoring of health outcomes** are basic components for the application of primary care team-based approaches to CDM within other comparable communities. To be successful, not all systems need to be the same, but the key concepts are essential for program implementation and sustainability.



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## APPENDICES

## APPENDIX 1: THE WAGNER CHRONIC CARE MODEL

The model comprises six interconnected areas that encourage high-quality chronic disease management.

1. *Self-management.* Patients have a central role in their care and take responsibility for their own health. To do so patients need: basic information about this illness, assistance with self-management skill building, and ongoing support from practitioners, family, friends, and community. Providers must be sensitive to cultural differences. Patient outcomes can be improved using evidence-based methods for patient empowerment and standardized assessments of self-management skills.
2. *Decision support.* Treatment decisions must be based on evidence-based guidelines. Organizations must effectively integrate the use of guidelines into the day-to-day practice of care providers in creative and easy-to-use ways. Providers must receive on-going education. Primary care practitioners should follow the patient's case when he/she is referred to a specialist.
3. *Delivery system design.* The delivery of patient care requires: determining what care is needed, clarifying roles and tasks to ensure the patient receives quality care, ensuring all those caring for the patient have up-to-date patient information, and making follow-up a standard procedure. In a well-designed system practitioners plan visits well in advance based on the patient's needs and self-management goals. Patients should attend "group visits" with practitioners and patients with similar health issues. Non-physician staff should be cross-trained to provide care via standing orders.
4. *Clinical information system.* A registry that tracks individual patients and populations is necessary in the management of chronic illness. The registry is the foundation for successful integration of all elements of the chronic care model. The entire team uses the registry to guide treatment, anticipate problems, and track progress.
5. *Organization of health care.* The health care system and organizations must create an environment in which organizational efforts to improve the health of individuals with chronic illnesses can be successful. Senior leadership must identify chronic care as a priority and this must be reflected in business plans, policies and procedures, and financial planning. Senior leaders and clinician champions must be visible and committed members of the team, and provide the resources and support required for success.
6. *Community.* Health care organizations must reach out to form alliances and partnerships with government programs, local agencies, schools, faith organizations, businesses, and clubs that can support or expand the health system's care for chronically ill patients. (Wagner,

## APPENDIX 2: EXEMPLAR SURVEY

### Survey Questions

#### *Primary health care team*

- Please describe your primary health care team (e.g. composition, scope of practice, roles).
- Please outline the team's approach and philosophy to chronic disease management.
- Has there been a performance evaluation (internal or external) of the primary health care team approach? If so, what changes in processes, health outcomes resulted?

#### *Information system*

- What information, guidelines, training, programs, or models inform your team's approach to chronic disease management?
- How is information about patients shared amongst team members?

#### *Patient's role*

- How are patients referred to your team?
- What role does the patient have in their treatment?

#### *Obstacles/successes*

- What challenges/obstacles to implementation did your team encounter?
- Describe how you overcame these challenges/obstacles?
- What lessons have you learned that would help others implement a team approach to chronic disease management?

Please return completed survey by **31 December** to one of the following:

thomas.rathwell@dal.ca, or erin.fredericks@dal.ca, or judah.goldstein@dal.ca

Or mail to: School of Health Administration, Dalhousie University, 5599 Fenwick Street, Halifax, NS B3H 1R

Do you have patients who have a

## Introduction to Chronic Disease Management

### WEB-BASED COURSE

Chronic disease is the number one global issue in Canada and Alberta providing numerous challenges to health care professionals in terms of the management of multi-system disease and the delivery of services across the practice team in providing their patients with optimal care. The promotion of self-management and preventative care by the health care system and health care professionals is the key to helping patients address their chronic condition.

This web-based course will equip participants with the ability to develop and utilise knowledge and skills for implementing chronic disease management approaches, including how to effectively utilise a team approach. Participants will learn about effective, evidence-based strategies that enhance chronic disease management and will also develop skills in supporting self-management principles for people with chronic disease.

#### Course Content

Topics covered in this course include:

- Wagner Chronic Care Model
- Chronic Disease Management Principles
- Partnering with the Client
- Understanding the Patient and Health Professional Relationship
- Why a Partnership Model of Care
- Choices and Changes Overview for Motivational Interviewing
- Meaningful Interactions
- Supporting Self-Management, and
- Goal Setting and Action Planning



#### Course Length

This course can be completed in 90 minutes and is set up to be completed in numerous sittings.

#### Intended Audience

All health care professionals interested in chronic disease management and individuals interested in registering for the two-day Chronic Care Skills Development Workshop and/or the two-day Flinders Model for Coordinated Care Plans Workshop.

Cost - **FREE OF CHARGE**

#### Registration

Registration opens on January 12, 2009.

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Do you have patients who are:

- Ambivalent?
- Frustrated?
- Complacent?

## CHRONIC CARE

### SKILLS DEVELOPMENT WORKSHOP

LEARNING SKILLS TO IMPROVE CARE OF  
PATIENTS WITH CHRONIC CONDITION

#### THE POWER OF CHANGE

Historically, patient motivation and behaviour were viewed as the domain of the patient. The implied assumption was that the clinician could do little more than provide information to influence the patient's actions. We now know this to be an inaccurate assumption about the dynamic that takes place between clinician and patient. This workshop will teach you the skills you need to support your patients in their journey of lifestyle changes and self-management to improve their chronic condition.

*7 of the 10 most deadly diseases, including cardiovascular disease and diabetes, are associated with PATIENT BEHAVIOR*

(National Centre for Health Statistics, 1996)

#### CHOICES & CHANGES:

##### MOTIVATIONAL INTERVIEWING

Motivational Interviewing was first developed and used in the addiction field as an effective strategy for behaviour change. The use of this approach has expanded into Primary Care Settings and is used by many disciplines wanting to focus on the special issues and concerns unique to the individual patient that fit into the context of the patients' life and support lifestyle change to better manage chronic condition.

##### FLINDERS MODEL:

##### Coordinated Care Plans for People with Chronic Conditions

Learn about a generic set of tools and processes that enables clinicians and clients to undertake a structured process that allows for assessment of self-management behaviours, collaborative identification of problems and goal setting leading to the development of individualized care plans. These care plans are important cornerstones in enhancing self-management in people with chronic conditions.

##### GROUP FACILITATION SKILLS

Learn how to lead group discussions, assess group development, and balance group needs with individual needs in an environment that provides opportunity to practice and improve skills as you learn them.

##### INTENDED AUDIENCE

##### COST - FREE-OF-CHARGE

##### TO REGISTER

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### • Chronic Condition?

## Introduction to Chronic Disease Management

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#### Cost - FREE OF CHARGE

#### Registration

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- Frustrated?
- Complacent?

## CHRONIC CARE

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Learn how to lead group discussions, assess group development, and balance group needs with individual needs in an environment that provides opportunity to practice and improve skills as you learn them.

#### INTENDED AUDIENCE

#### COST - FREE OF CHARGE

#### TO REGISTER

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Registration opens on January 12, 2009.

FOR MORE INFORMATION, PLEASE CALL  
(403) 943-1776 OR (403) 943-1923



Funded by: **Alberta** HEALTH SERVICES



**Alberta Health Services**

## Do you have patients who are:

- *Ambivalent?*
- *Frustrated?*
- *Complacent?*

## FLINDERS MODEL

LEARN THE HOW TO'S OF COORDINATED CARE  
PLANS FOR PEOPLE WITH CHRONIC CONDITIONS

With the aging of our population and the dramatic rise in the rate of chronic conditions, our health system has a growing need to better manage chronic disease. Effective support for self-management is an important component of such change.

### Flinders Model Workshop

This two-day hands-on workshop is an exciting and innovative approach that will enable health professionals to better support people with chronic illnesses. It will enable health professionals to empower their clients to become active partners in their care and more effective self-managers through learning about a generic set of tools and processes developed by the Flinders Human Behaviour and Health Research Institute. Clinicians are enabled, with their clients, to undertake a structured process that allows for assessment of self-management behaviours, collaborative identification of problems and goal setting leading to the development of individualized care plans. These tools and processes, proven to improve health outcomes, are important cornerstones in enhancing self-management in people with chronic conditions.



### Intended Audience

This workshop was developed for health professionals working with individuals who have a range of chronic conditions. Participants are asked to supply a patient/volunteer for the second day of the workshop. This can be an actual patient, family member, neighbour, friend, etc., anyone who participants feel comfortable working with who has a chronic condition. Participants may also earn their Certificate of Competence through Flinders University, Adelaide, Australia, by completing three care plans within three months from the date when they attended this workshop.

### Flinders LITE

A two-hour overview of the full workshop described above particularly suited for patient-care managers, health care managers, etc.

**Cost:** Both workshops are FREE OF CHARGE

Prerequisite (Highly Recommended): Introduction to Chronic Disease Management  
(FREE web-based course)

### Registration

Registration opens on January 12, 2009.

To find a workshop near you or to self-register for these and any of our other FREE workshops and courses, please visit <http://www.absorbtraining.ca/cdm/index.html>

FOR MORE INFORMATION, PLEASE CALL  
(403) 913-1776 OR (403) 913-1928



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HEALTH & WELLNESS



Do you have patients who are:

- Frustrated
- Overwhelmed
- Complacent

## FLINDERS MODEL

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cdm  
CHRONIC DISEASE MANAGEMENT  
LEADING THE WAY

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HEALTH & WELLNESS

 **Alberta Health Services**

## APPENDIX 6: SOCIAL DETERMINANTS OF HEALTH

- Safe, secure affordable housing
- Socioeconomic status
- Food security
- Social support networks
- Education
- Employment and working conditions
- Physical environments
- Biology and genetics
- Personal health practices
- Healthy child development
- Health services<sup>31</sup>

## APPENDIX 7: PATIENT SELF-CARE FORM, FINLAND



**You have been booked the following annual appointments:**

Registered nurse or public health nurse \_\_\_\_ / \_\_\_\_ 200\_\_ at \_\_\_\_

Doctor \_\_\_\_ / \_\_\_\_ 200\_\_ at \_\_\_\_

Please take a moment to review your self-care. Please **fill in** this form before coming to your annual appointment and **bring this form with you to your appointment with the nurse.**

On the basis of your responses and discussion, we will be drawing up **your personal treatment plan**, which will include your self-care goals and guidance needs.

Please bring with you **your health monitoring notes and your monitoring equipment** (i.e. the equipment you use to monitor your condition, for instance your blood sugar meter, blood pressure meter or PEF meter) and the **prescriptions for your medication.**

**What is self-care?**

Self-care is what you can do every day to manage your own health. It includes things like a healthy diet, sufficient exercise, not smoking, and taking care of your mental well-being. Self-care also includes medication and self-monitoring, for instance keeping track of your body weight. Self-care is worth the effort, because active self-care can prevent chronic conditions and related complications while maintaining a good balance of care in the treatment of an illness.

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## 1. DAILY SELF-CARE

This table lists the major points in self-care and recommendations for them.  
Please tick the appropriate box for each statement.

<b>1 A) FOOD QUANTITY AND QUALITY</b>	<b>YES</b>	<b>NO/SOMETIMES</b>
I eat fibre-rich food daily (e.g. wholemeal bread, porridge, bran, vegetables, berries, fruit)	<input type="checkbox"/>	<input type="checkbox"/>
I use the plate model to put together my meals. (plate model = a plate containing 1/2 vegetables, 1/4 meat/fish/chicken and 1/4 potatoes/rice/pasta)	<input type="checkbox"/>	<input type="checkbox"/>
I use vegetable margarine on my bread and vegetable fat/oil in cooking.	<input type="checkbox"/>	<input type="checkbox"/>
I rarely eat foods containing animal fat or hidden fat. (e.g. fatty cheeses, pastries, sausages and ready-made foods)	<input type="checkbox"/>	<input type="checkbox"/>
I monitor how much salt I use in cooking and use mineral salt. (e.g. Pansuola, Seltin)	<input type="checkbox"/>	<input type="checkbox"/>
I read food package labels, and they influence my shopping decisions.	<input type="checkbox"/>	<input type="checkbox"/>
<b>1 B) WEIGHT CONTROL</b>	<b>YES</b>	<b>NO</b>
My waist measurement is less than 90 cm (women) / less than 100 cm (men). (Measure your waist 2 cm above your navel.)	<input type="checkbox"/>	<input type="checkbox"/>
My weight index is close to 25 (kg/m <sup>2</sup> ). (your weight index is your weight divided by your height squared; the nurse will calculate this for you if needed)	<input type="checkbox"/>	<input type="checkbox"/>
<b>1 C) EXERCISE</b>	<b>YES</b>	<b>NO/PARTLY</b>
I get at least 30 min of practical exercise daily. (e.g. household chores, going to and from work)	<input type="checkbox"/>	<input type="checkbox"/>
I exercise (e.g. Nordic walking, gym, skiing, swimming, cycling) 2-3 times a week.	<input type="checkbox"/>	<input type="checkbox"/>
<b>1 D) TOBACCO AND ALCOHOL</b>	<b>YES</b>	<b>NO</b>
I do not smoke.	<input type="checkbox"/>	<input type="checkbox"/>
I smoke, but I would like to quit.	<input type="checkbox"/>	<input type="checkbox"/>
I do not drink alcohol.	<input type="checkbox"/>	<input type="checkbox"/>
I drink alcohol in moderation. Women: max. 1 portion per day, not every day; Men: max. 2 portions per day, not every day. One portion equals 1 bottle medium beer or 12 cl table wine or 8 cl fortified wine or 4 cl 40% spirits.	<input type="checkbox"/>	<input type="checkbox"/>
<b>1 E) MENTAL WELL-BEING</b>	<b>YES</b>	<b>NO</b>
I feel I am capable of managing my condition.	<input type="checkbox"/>	<input type="checkbox"/>
I feel I have the support of people close to me when I need it.	<input type="checkbox"/>	<input type="checkbox"/>





## 2. MONITORING CHRONIC CONDITIONS

### 2 A) ALL PATIENTS PLEASE RESPOND TO THESE:

	YES	NO/PARTLY
I regularly take my prescribed medication and know what it does.	<input type="checkbox"/>	<input type="checkbox"/>
My blood pressure is in the target range, max: 130-140 / 80-85 mmHg	<input type="checkbox"/>	<input type="checkbox"/>
I monitor my blood pressure regularly as instructed by health care personnel	<input type="checkbox"/>	<input type="checkbox"/>
My blood cholesterol and fat levels are in the target range (Total cholesterol (TP-Chol) less than 4.5; good cholesterol (HDL) more than 1.1; bad cholesterol (LDL) less than 2.5; triglycerides (TP-Trgly) less than 1.7 mmol/l)	<input type="checkbox"/>	<input type="checkbox"/>

### 2 B) DIABETICS ONLY PLEASE RESPOND TO THESE:

	YES	NO/PARTLY
My long-term blood sugar level (GHbA1c) is less than 6.5 % (tablet medication) or less than 7% (insulin medication)	<input type="checkbox"/>	<input type="checkbox"/>
My morning blood glucose level is usually 4-6 mmol/l	<input type="checkbox"/>	<input type="checkbox"/>
My glucose level after meals is usually less than 9 mmol/l	<input type="checkbox"/>	<input type="checkbox"/>
I know how to regulate my insulin dose based on my blood sugar monitoring	<input type="checkbox"/>	<input type="checkbox"/>
I take care of my oral hygiene daily and visit a dentist or oral hygienist regularly	<input type="checkbox"/>	<input type="checkbox"/>
I check and care for my feet daily	<input type="checkbox"/>	<input type="checkbox"/>

### 2 C) ASTHMATICS ONLY PLEASE RESPOND TO THESE:

	YES	NO/PARTLY
My PEF levels are in the target range	<input type="checkbox"/>	<input type="checkbox"/>
I have a PEF meter at home	<input type="checkbox"/>	<input type="checkbox"/>
My doctor/nurse has told me when to monitor my PEF levels	<input type="checkbox"/>	<input type="checkbox"/>
I know how to regulate my asthma medication based on my PEF monitoring	<input type="checkbox"/>	<input type="checkbox"/>
I take care of my oral hygiene daily and visit a dentist or oral hygienist regularly	<input type="checkbox"/>	<input type="checkbox"/>

FOR ANY POINTS WHERE YOU RESPONDED 'YES', KEEP IT UP: THEY ARE GOOD FOR YOU

You can keep this form. Store it somewhere safe.

**Loving yourself pays off. A healthy lifestyle is a good start.**



### 3 SELF-CARE ASSESSMENT AND TARGETS

#### 3 A) WHICH OF THESE BEST DESCRIBES YOUR SELF-CARE?

##### ☐ GOOD

I know enough about my condition and its treatment

My lifestyle is such that it prevents progression of my condition and the emergence of related complications

I want to treat myself

I monitor my health and perform the agreed treatments

The indicator values for my condition are (almost) in the target range

##### ☐ FAIR

I need more information on my condition and its treatment

I have information, but knowing it does not usually affect how I do things

I want to treat myself, but there are things that prevent me from doing it in a satisfactory way

##### ☐ NEEDS WORK

I need more information on my condition and its treatment

I have information, but knowing it does not affect how I do things

I do not have the willpower or the mental strength to treat myself or my condition

The indicator values for my condition are far from the target range, and there are symptoms of related complications

#### 3 B) WHAT THINGS ARE PREVENTING OR INTERFERING WITH YOUR SELF-CARE?

- ☐ Nothing is interfering with my self-care. I can manage it in the best possible way
- ☐ Lack of capability, mental factors (e.g. stress)
- ☐ Loneliness or lack of peer support, family situation
- ☐ Lack of information or skills
- ☐ Another illness

#### 3 C) ARE YOU INTERESTED IN IMPROVING YOUR SELF-CARE? (please tick one)

- ☐ My self-care is good enough, and I see no need to change it.
- ☐ Yes, I would like to improve my self-care, and I am changing my lifestyle
- ☐ I am considering improving my self-care and/or changing my lifestyle
- ☐ I changed my lifestyle but have now reverted to my earlier habits
- ☐ I am focusing on other things in my life at the moment

#### 3 D) IS THERE SOMETHING ABOUT YOUR HEALTH THAT PARTICULARLY WORRIES YOU?

Set yourself a **target** which you can attain by changing your lifestyle. Consider what practical measures you need to take to attain the target and how it will benefit you.

Example: Target: reducing your intake of salt  
How to attain the target: buy bread with low salt and become accustomed to its taste  
Benefit: lower blood pressure, less swelling

My target: \_\_\_\_\_

How I can attain my target: \_\_\_\_\_

How I will benefit from attaining my target: \_\_\_\_\_



## APPENDIX 8: PDSA

The model for improvement was first published in 1992 by Langley, Nolan et al in 'The Improvement Guide: A Practical Approach to Enhancing Organizational Performance'. The model provides a framework for developing, testing and implementing changes to the way that things are done that will lead to improvement. This model consists of two parts that are of equal importance. The first, the 'thinking part', consists of three fundamental questions that are essential for guiding improvement work. These questions are: *"What are we trying to accomplish?"*, *"How will we know that a change is an improvement?"* and *"What changes can we make that can lead to an improvement?"* The second part, the 'doing part', is made up of Plan, Do, Study, Act (PDSA) cycles. If implemented effectively, it will lead to rapid change and process improvement.

#### ABOUT THE HEALTH COUNCIL OF CANADA

Canada's First Ministers established the Health Council of Canada in the 2003 *Accord on Health Care Renewal* and enhanced our role in the 2004 *10-Year Plan to Strengthen Health Care*. We report on the progress of health care renewal, on the health status of Canadians, and on the health outcomes of our system. Our goal is to provide a system-wide perspective on health care reform for the Canadian public, with particular attention to accountability and transparency.

The participating jurisdictions have named Councillors representing each of their governments and also Councillors with expertise and broad experience in areas such as community care, Aboriginal health, nursing, health education and administration, finance, medicine and pharmacy. Participating jurisdictions include British Columbia, Saskatchewan, Manitoba, Ontario, Prince Edward Island, Nova Scotia, New Brunswick, Newfoundland and Labrador, Yukon, the Northwest Territories, Nunavut and the federal government. Funded by Health Canada, the Health Council operates as an independent non-profit agency, with members of the corporation being the ministers of health of the participating jurisdictions.

#### The Council's vision

An informed and healthy Canadian public, confident in the effectiveness, sustainability and capacity of the Canadian health care system to promote their health and meet their health care needs.

#### The Council's mission

The Health Council of Canada fosters accountability and transparency by assessing progress in improving the quality, effectiveness and sustainability of the health care system. Through insightful monitoring, public reporting and facilitating informed discussion, the Council shines a light on what helps or hinders health care renewal and the well-being of Canadians.

#### Councillors

##### GOVERNMENT REPRESENTATIVES

Mr. Albert Fogarty - Prince Edward Island  
Dr. Alex Gillis - Nova Scotia  
Mr. Stuart J. Whitley - Yukon  
Mr. Michel C. Leger - New Brunswick  
Ms. Lyn McLeod - Ontario  
Mr. David Charles Richardson - Nunavut  
Ms. Elizabeth Snider - Northwest Territories  
Dr. Les Vertesi - British Columbia

##### NON - GOVERNMENT REPRESENTATIVES

Dr. Jeanne F. Besner - Chair  
Dr. M. Ian Bowmer - Vice Chair  
Mr. Jean-Guy Finn  
Dr. Danielle Martin  
Mr. George L. Morfitt  
Ms. Verda Petry  
Dr. Stanley Vollant

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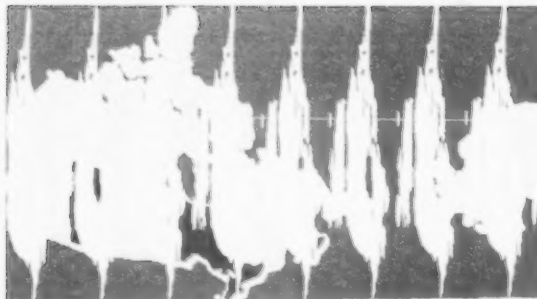
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Health Council of Canada



Conseil canadien de la santé

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